Problem Solving Solutions

Outline

Scenario 1: Examine Flights in Oakland Oceanic Sector 4

Scenario 2: Analyze United Airlines Flight 57

Scenario 3: Explore the HNL to SFO Traffic Stream

Scenario 4: Load Display GFS Data

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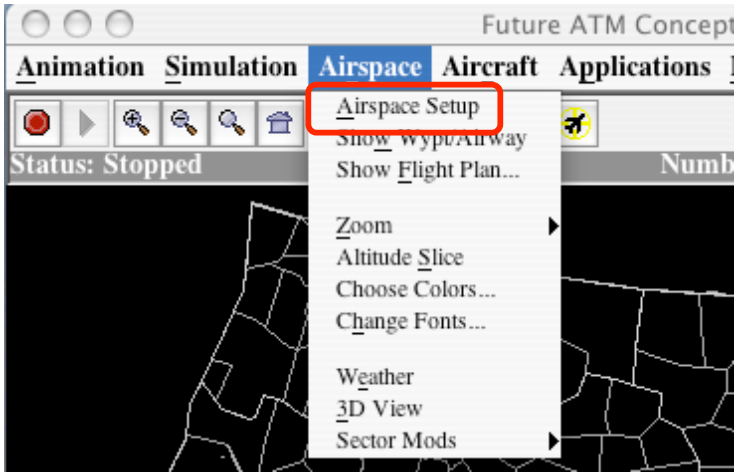
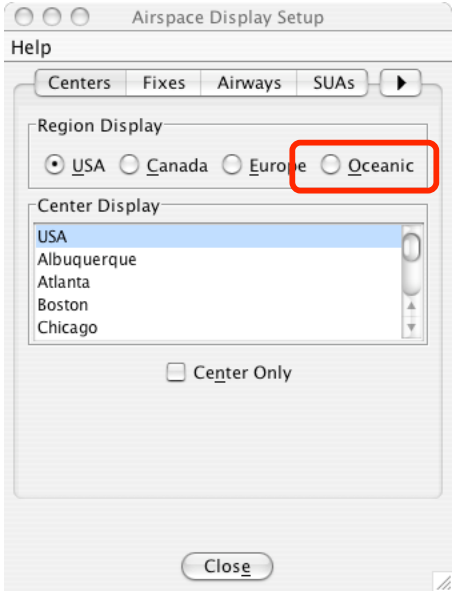
Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 1*

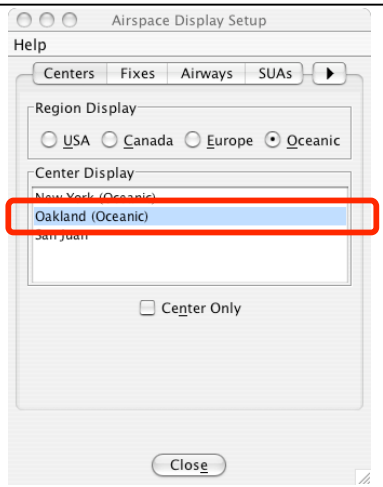
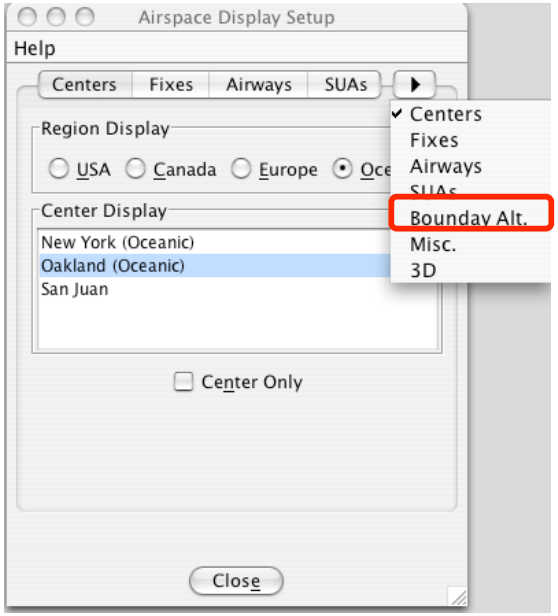
Step 1:
Select the *Airspace Setup* menu item from the **Airspace** menu



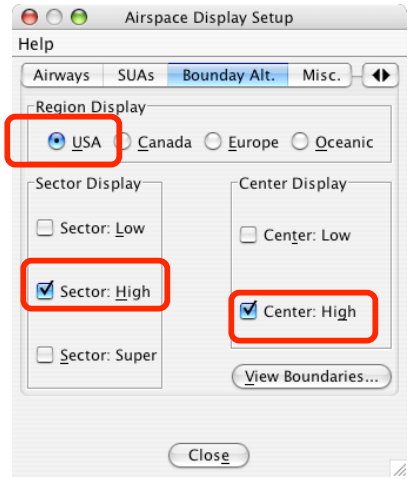
Step 2:
Select the Oceanic radio button from the "Airspace Setup" panel



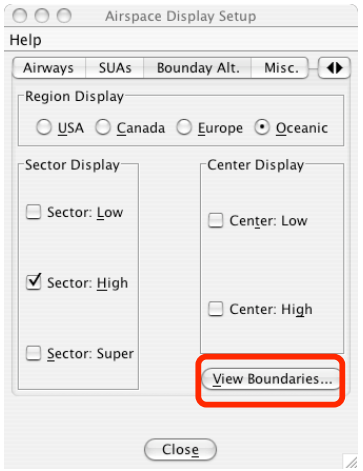
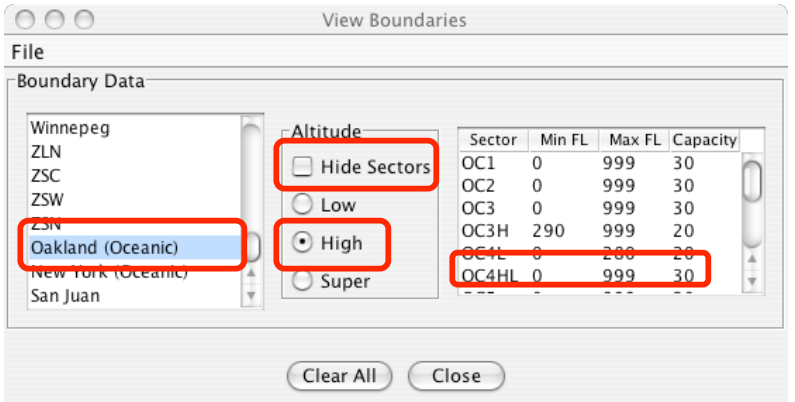
Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 1*

Step 3: Select Oakland (Oceanic) from the list of available Centers	
Step 4: Select the Boundary Alt tab on the "Airspace Display Setup" panel	

Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 1*

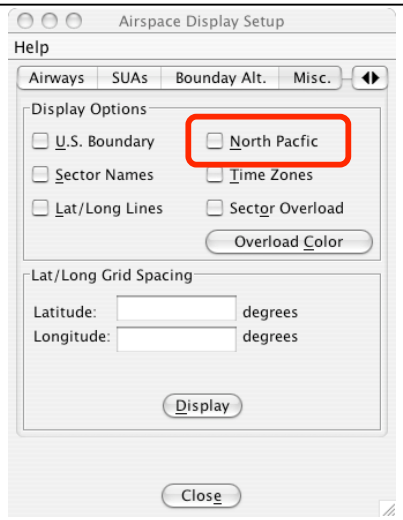
Step 5: With the "USA" radio button selected, deselect the "Sector:High" and "Center:High" checkboxes	
Step 6: Select the "Oceanic" radio button and select the "Sector:High" checkbox	

Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 1*

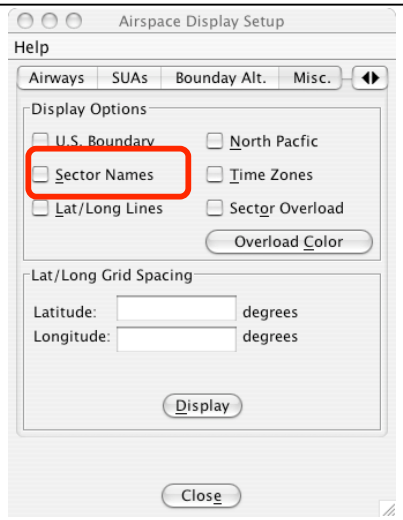
Step 7: Press the "View Boundaries" button	
Step 8: Select the "Oakland (Oceanic)" list entry, press the "High" radio button, select the "Hide Sectors" checkbox, and select "OC4HL"	

Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 1*

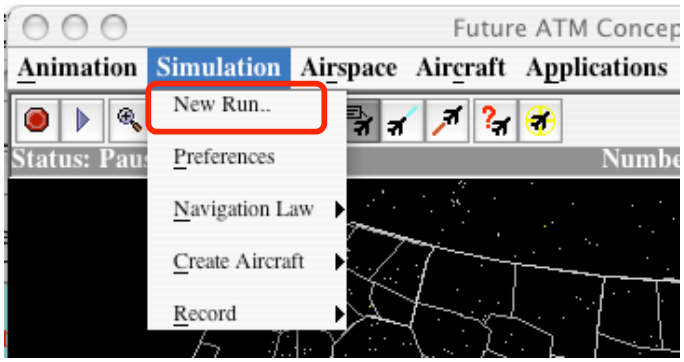
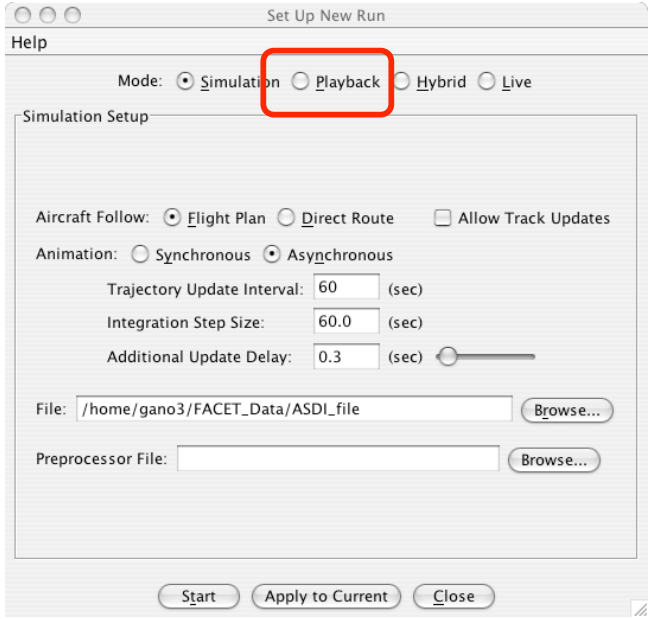
Step 9:
Select the "North Pacific" checkbox on the "Misc" tab of the "Airspace Display Setup" panel.



Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 2*

Step 10: Select the "Sector Names" checkbox	

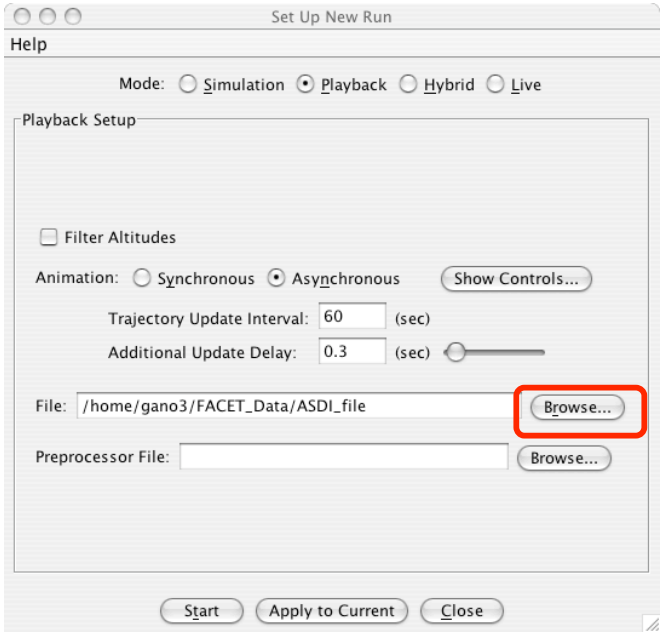
Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 3*

Step 11: Select the *New Run* menu item from the **Simulation** menu	
Step 12: Select the Playback radio button from the "Set Up New Run" panel.	

Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 3*

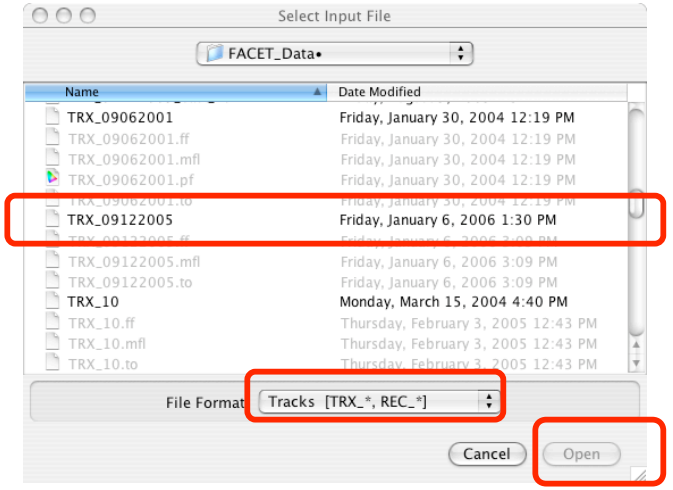
STEP 13:

Set the playback run attributes and select the "Browse" button. By default, none of the attributes should require changing.



STEP 14:

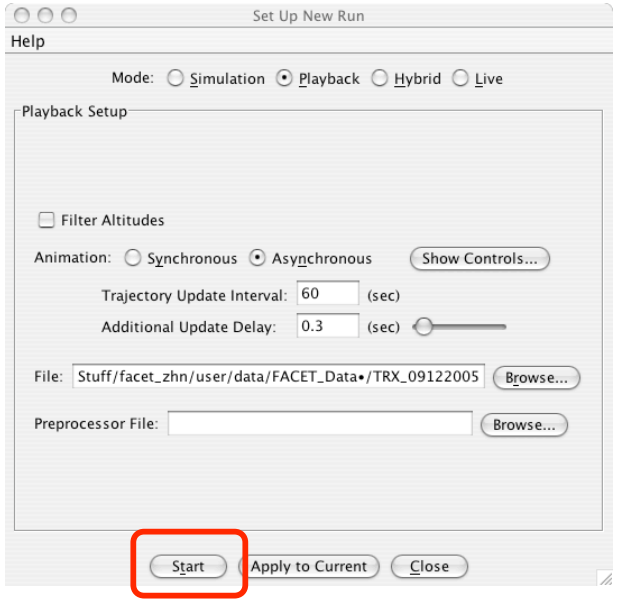
Select the "Tracks" file filter then select the TRX_09122005 input file. After completing these steps press the "Open" button.



Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 3*

STEP 15:

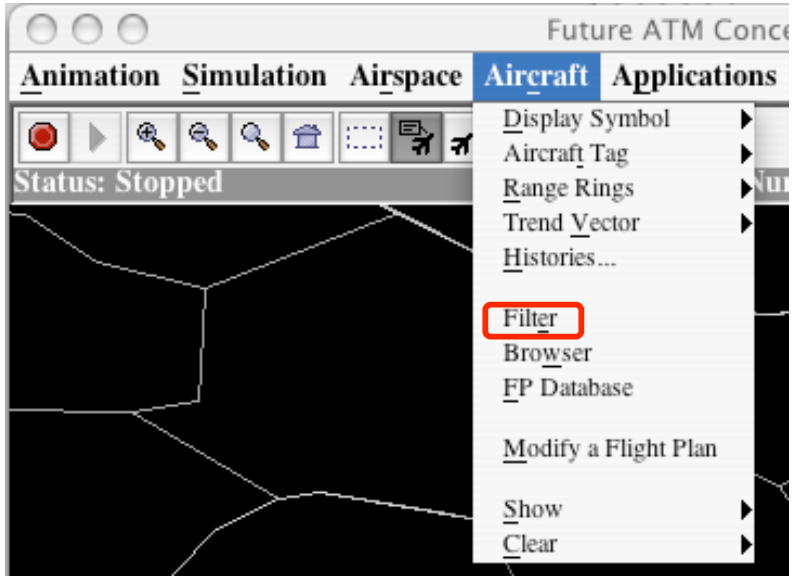
Press the Start button to initiate the FACET playback session



Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 4*

STEP 16:

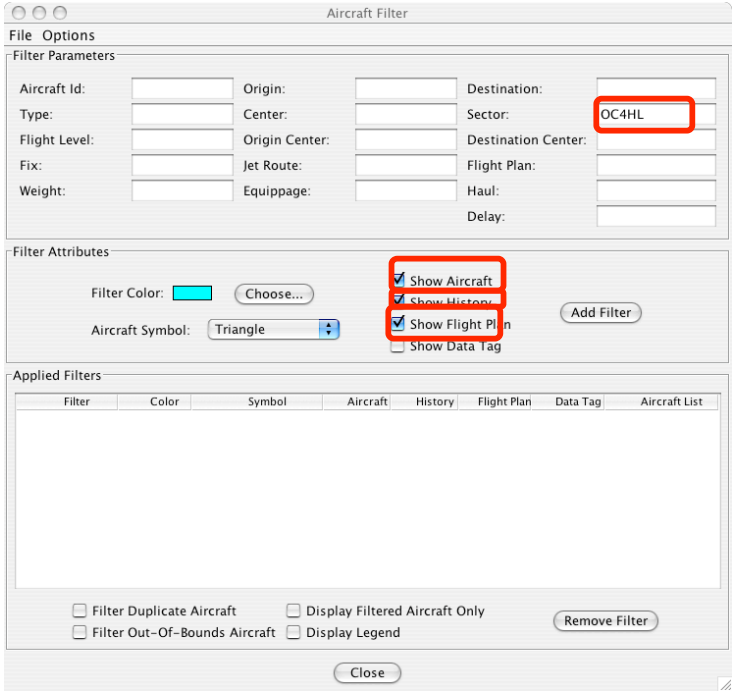
Select the *Filter* menu item from the **Aircraft** menu



Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 4*

STEP 17:

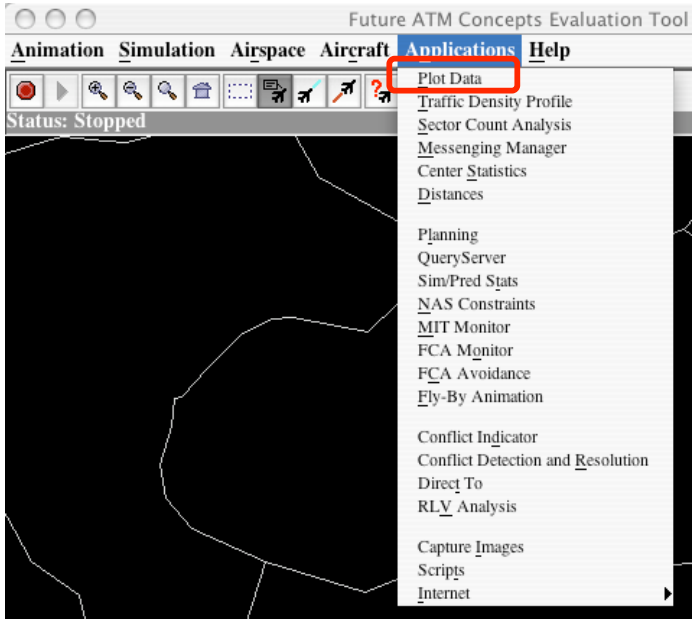
In the Filter panel, enter OC4HL as the Sector. Also, select the "Show History" check box, deselect the "Show Data Tag" check box, and de-select the "Show Flight Plan" check box.



Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 5*

STEP 18:

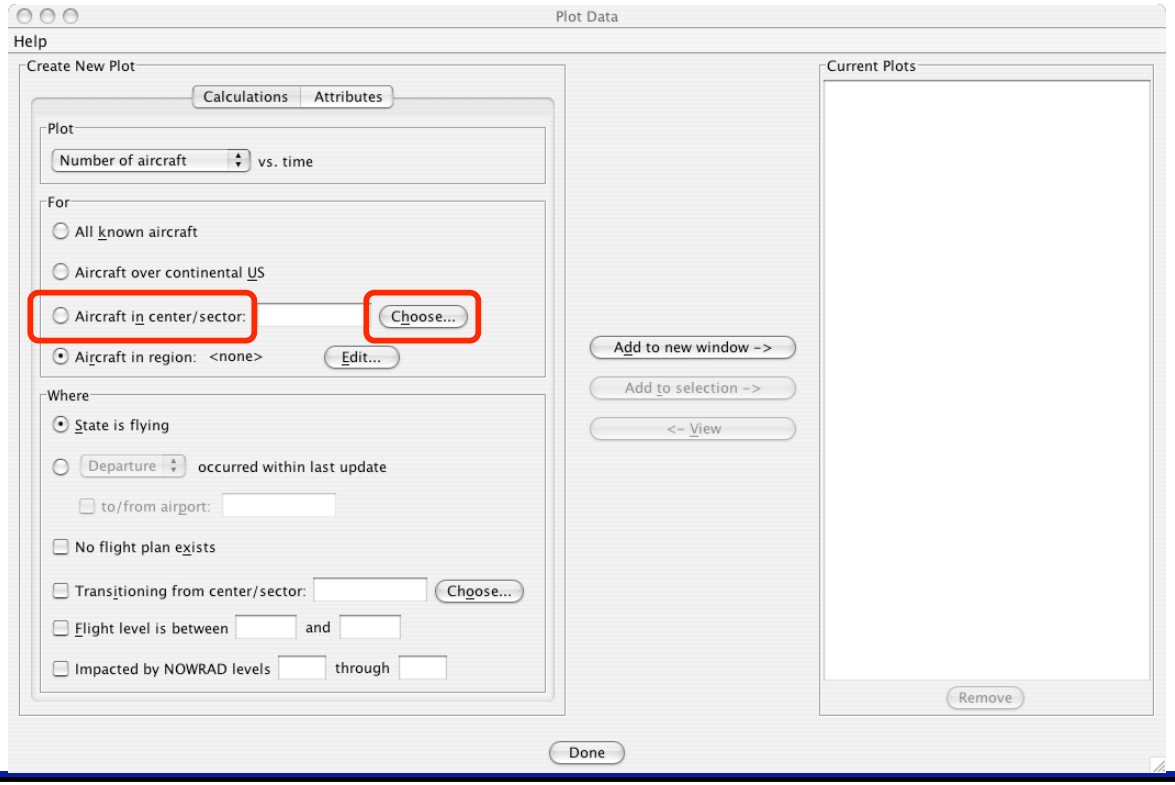
Select the *Plot Data* menu item from the **Application** menu



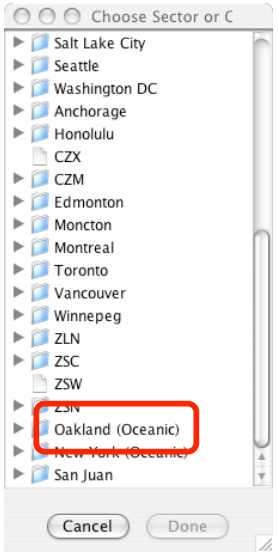
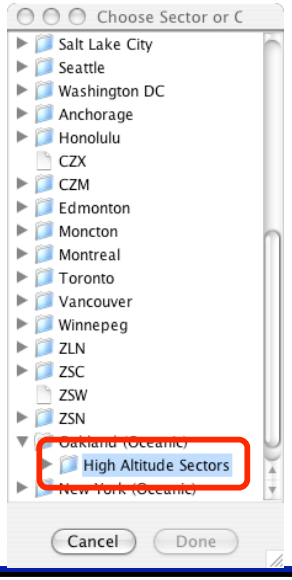
Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 5*

STEP 19:

Select the "Aircraft in center/sector" radio button then the "Choose" button. Alternatively, steps 20-22 can be bypassed by entering OC4HL in the "center/sector" text field.



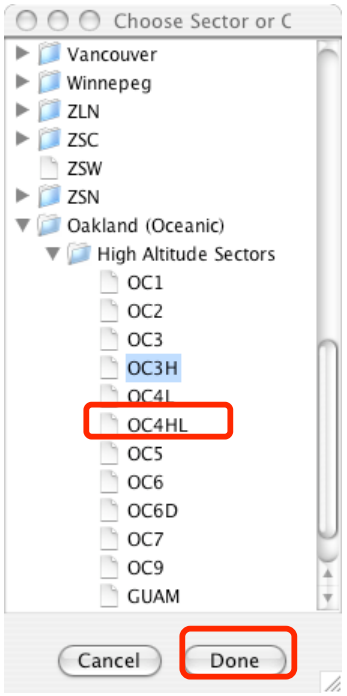
Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 5*

STEP 20: Open the "Oakland (Oceanic)" folder	
STEP 21: Open the "High Altitude Sectors" folder	

Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 5*

STEP 22:

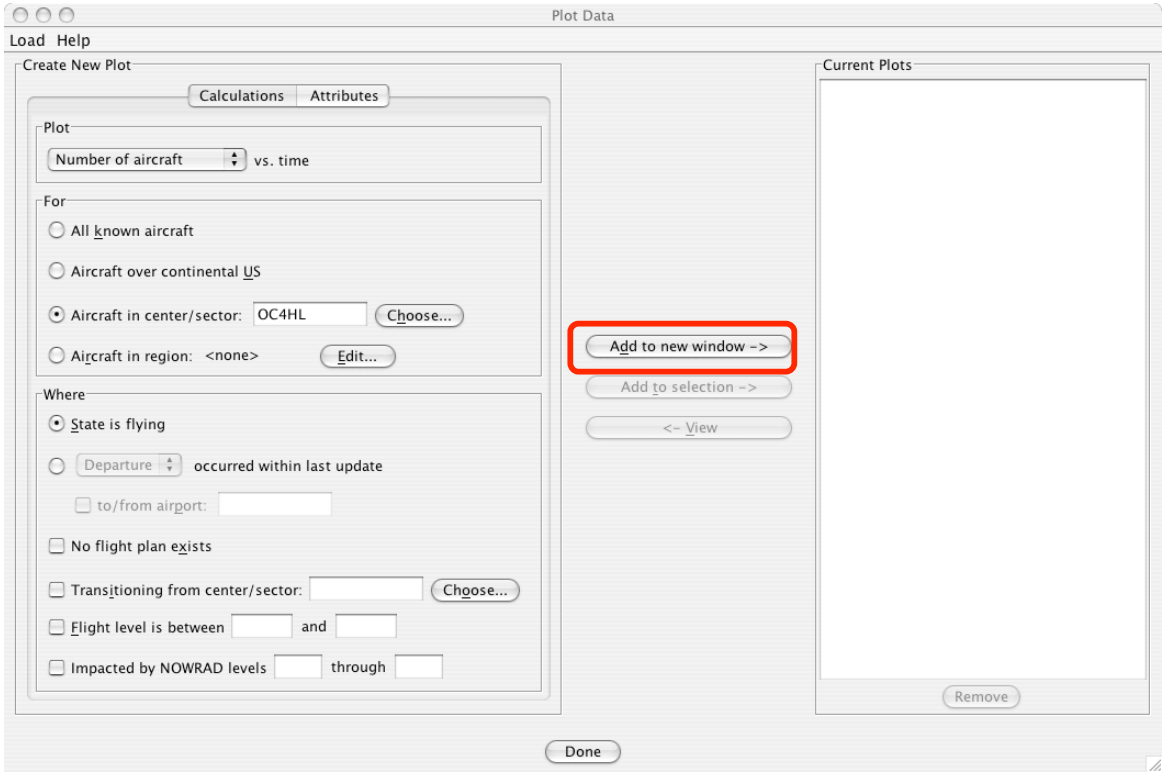
Select "OC4HL" from the list of sectors and press the "Done" button.



Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 5*

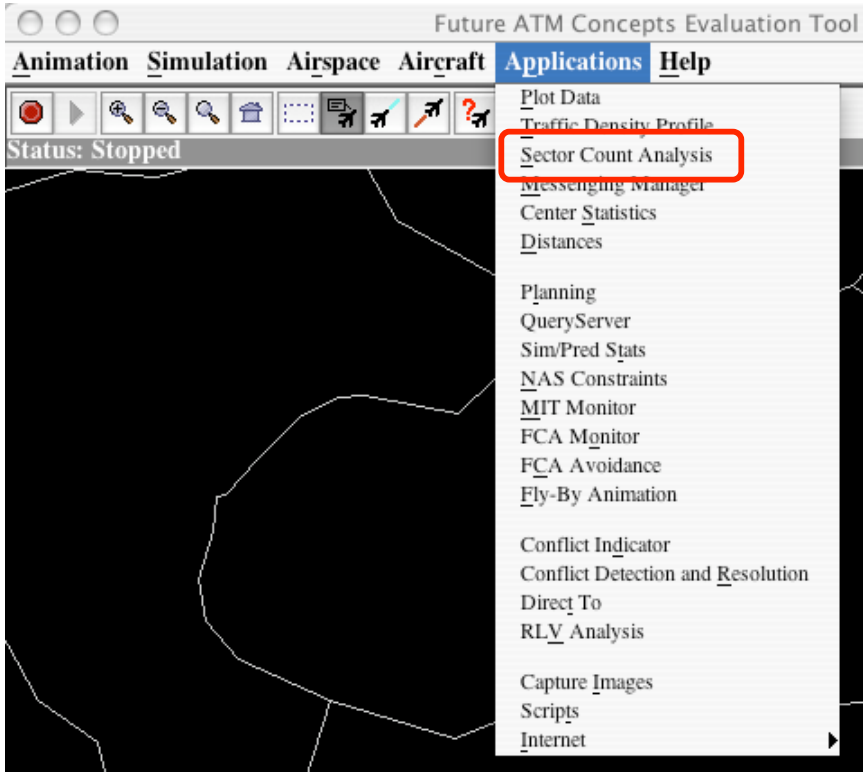
STEP 23:

Press the "Add to new window" button to add this plot to the list of currently implemented plots. Action leads to a blank plot window being displayed.



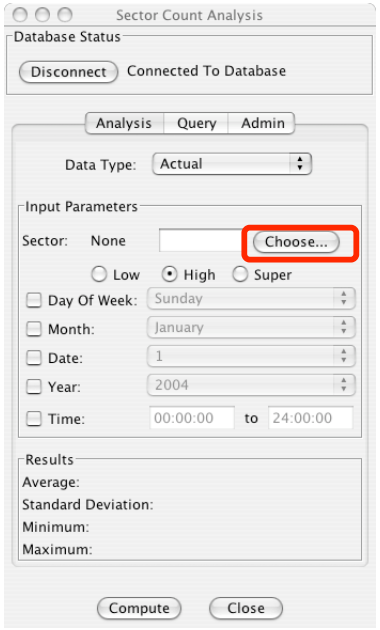
Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 6*

Step 24:
Choose *Sector Count Analysis* from the **Applications** menu

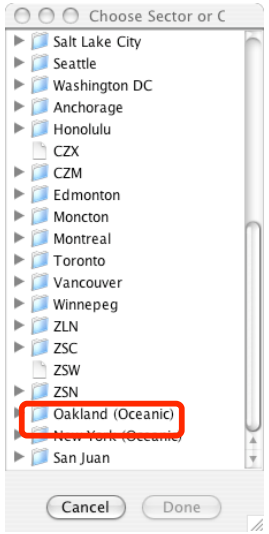


Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 6*

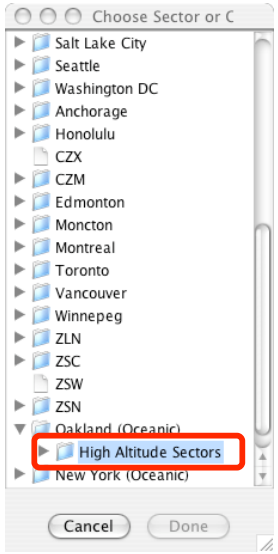
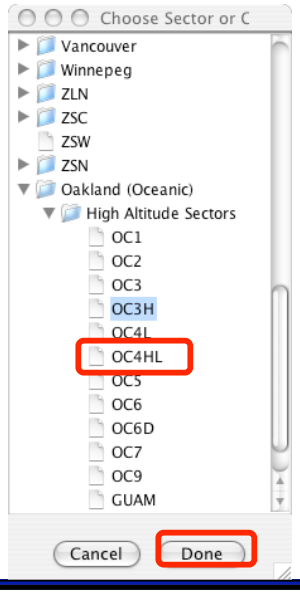
Step 25:
To query the sector count database, press the "Choose" button and select the sector(s) of interest. Alternatively, OC4HL can be entered directly in the "Sector" text field.



Step 26:
Open the "Oakland (Oceanic)" folder, as an example.

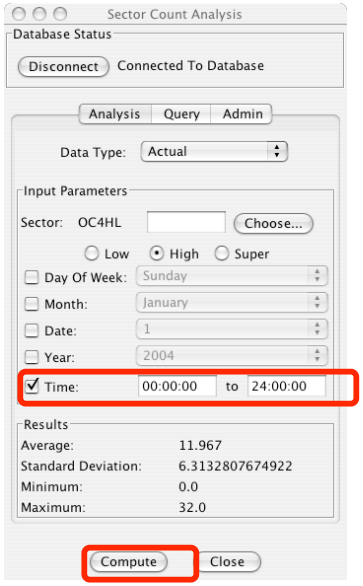


Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 6*

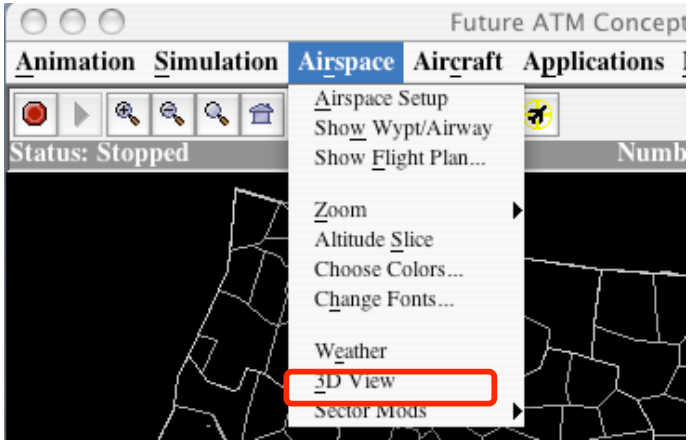
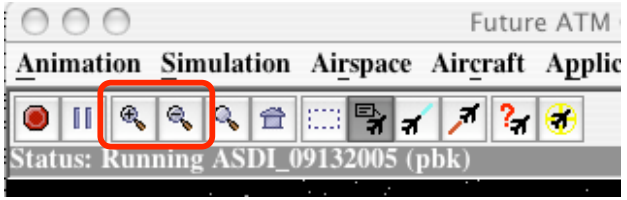
Step 27: Open the "High Altitude Sectors" folder.	
Step 28: Select "OC4HL", for example, then press the "Done" button.	

Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 6*

Step 29:
Select the "Time" checkbox and enter "00:00:00" to "24:00:00" as the time range then press the "Compute" button.

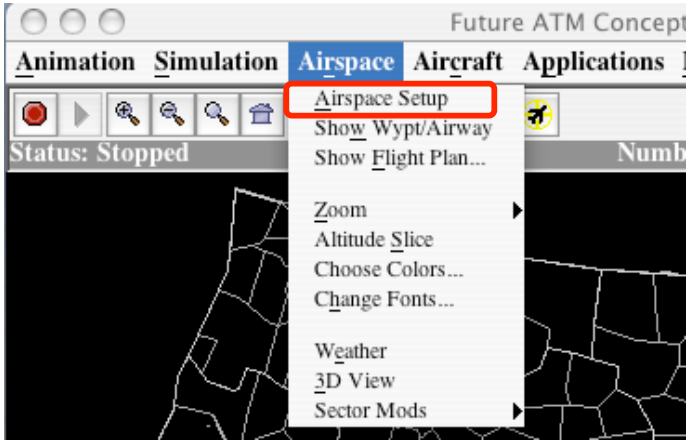


Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 7*

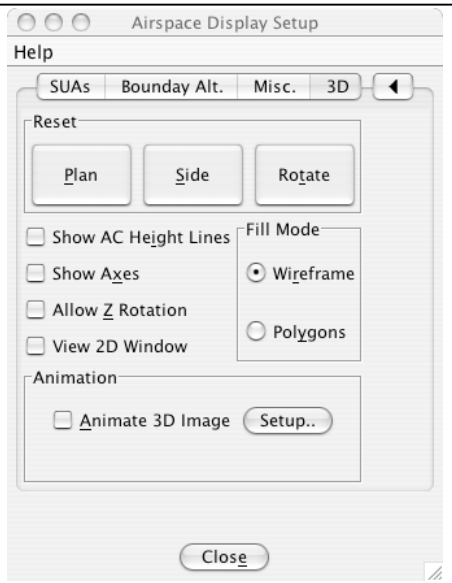
Step 30: Select the *3D View* menu item from the **Airspace** menu	
Step 31: Use the "Zoom In" and "Zoom Out" toolbar buttons in conjunction with the keyboard arrow keys to adjust the display	

Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 7*

Step 32:
Select the *Airspace Display Setup* menu item from the **Airspace** menu

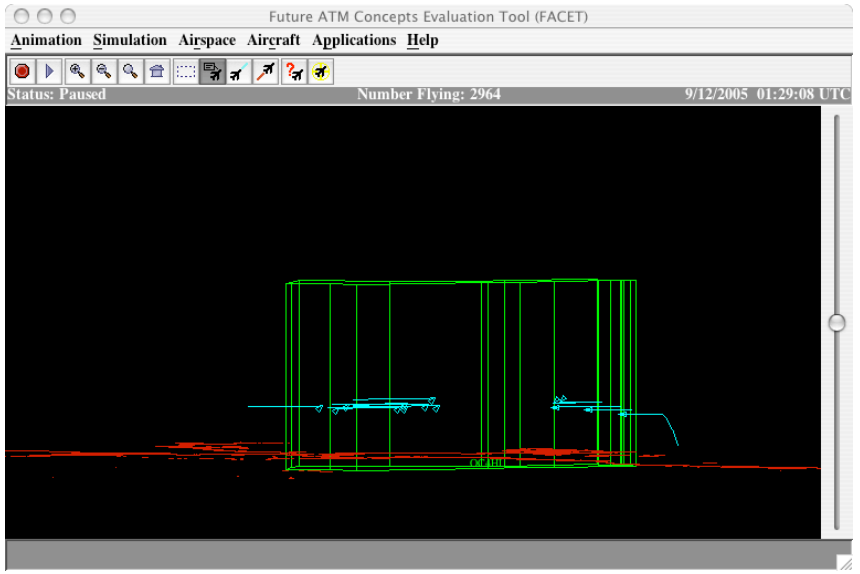


Step 33:
Use the control options on the "3D" tab to adjust the default 3D display settings



Scenario 1: Examine Flights in Oakland Oceanic Sector 4, *Step 7*

The 3D display at approximately 1:30 UTC should look roughly like the image to the right.



Outline

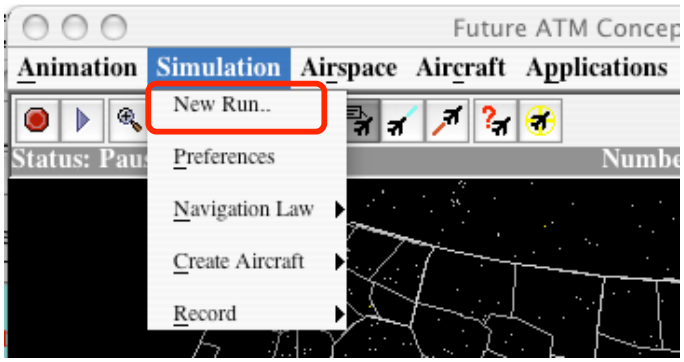
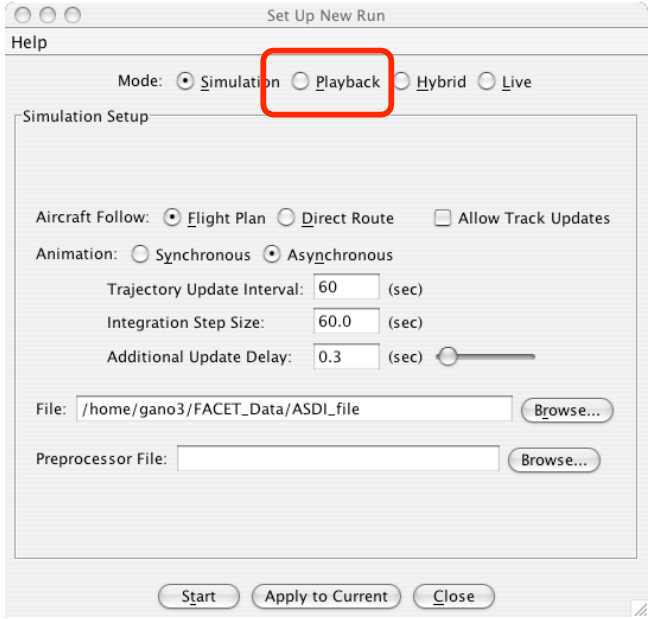
Scenario 1: Examine Flights in Oakland Oceanic Sector 4

Scenario 2: Analyze United Airlines Flight 57

Scenario 3: Explore the HNL to SFO Traffic Stream

Scenario 4: Load Display GFS Data

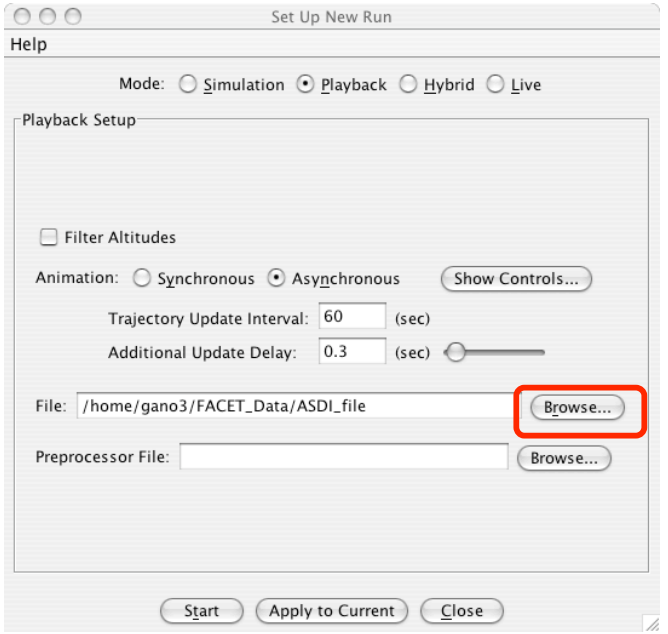
Scenario 2: Analyze United Airlines Flight 57, *Step 1*

Step 1: Select the *New Run* menu item from the **Simulation** menu	
Step 2: Select the Playback radio button from the "Set Up New Run" panel.	

Scenario 2: Analyze United Airlines Flight 57, *Step 1*

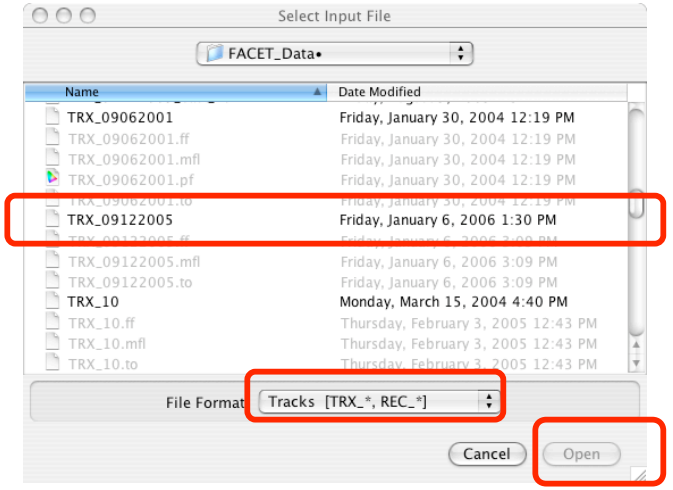
STEP 3:

Set the playback run attributes and select the "Browse" button. By default, none of the attributes should require changing.



STEP 4:

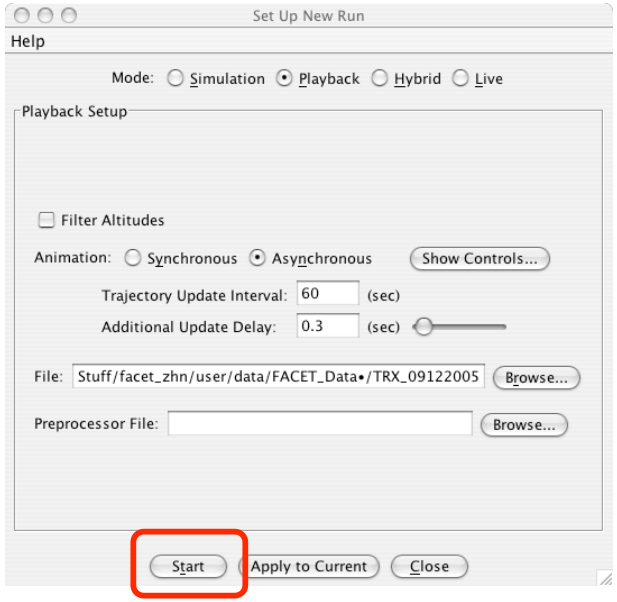
Select the "Tracks" file filter then select the TRX_09122005 input file. After completing these steps press the "Open" button.



Scenario 2: Analyze United Airlines Flight 57, *Step 1*

STEP 15:

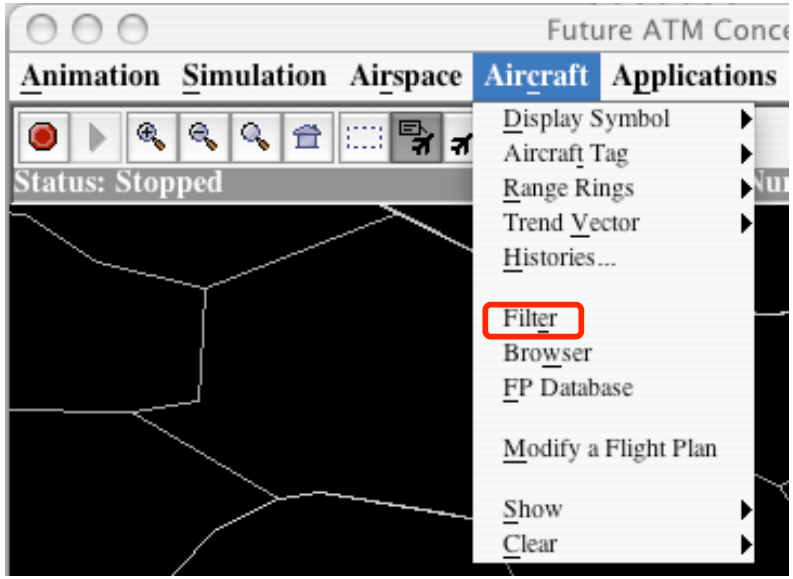
Press the Start button to initiate the FACET playback session



Scenario 2: Analyze United Airlines Flight 57, *Step 2*

STEP 6:

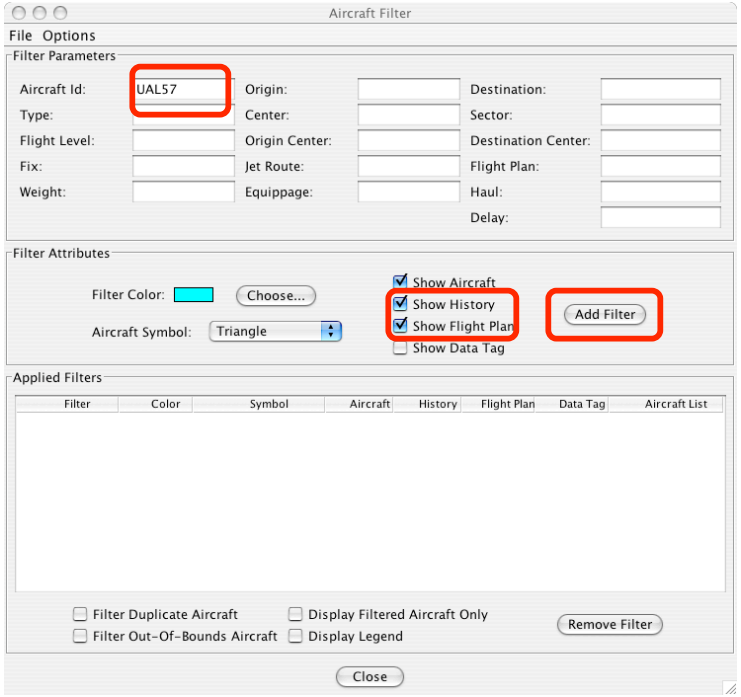
Select the *Filter* menu item from the **Aircraft** menu



Scenario 2: Analyze United Airlines Flight 57, *Step 2*

STEP 7:

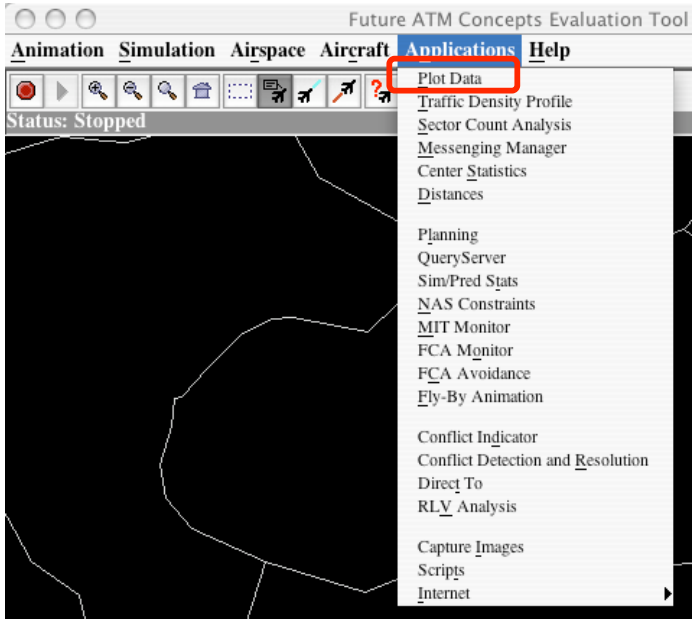
In the Filter panel, enter UAL57 as the Aircraft Id, select the "Show History" checkbox, de-select the "Show Flight Plan" checkbox, and press the "Add Filter" button.



Scenario 2: Analyze United Airlines Flight 57, *Step 3*

STEP 8:

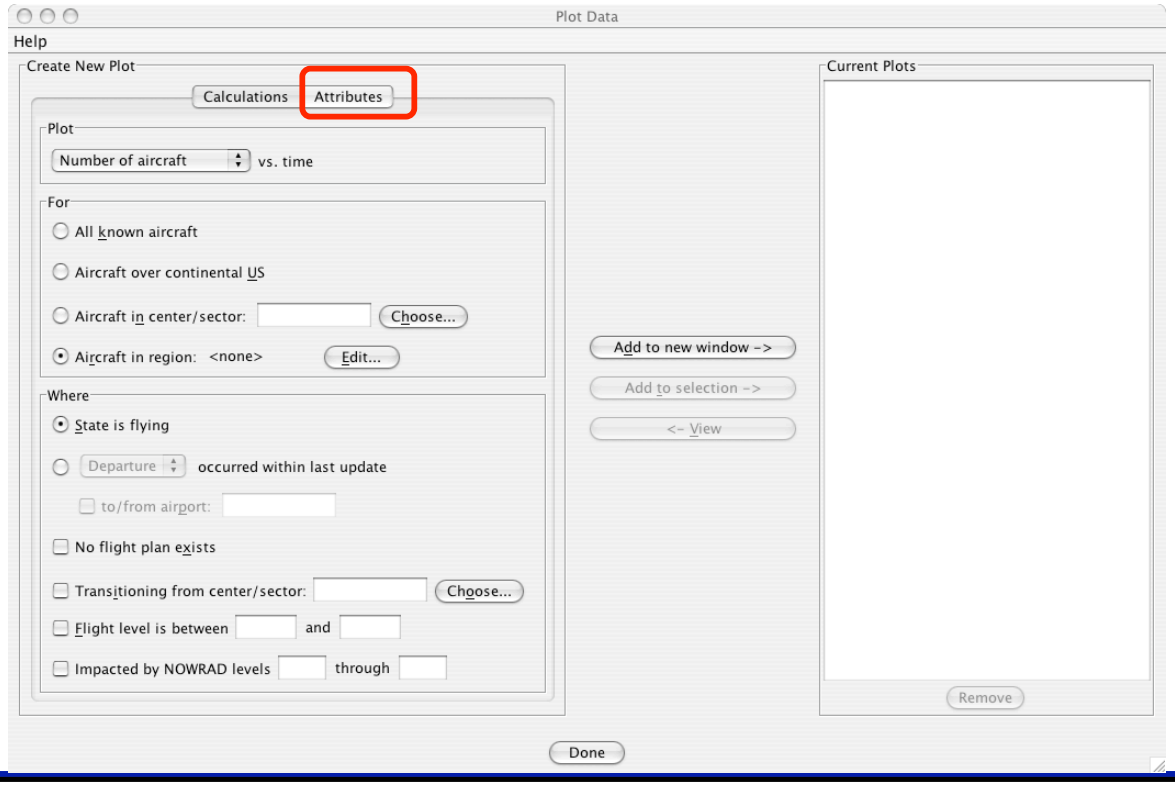
Select the *Plot Data* menu item from the **Application** menu



Scenario 2: Analyze United Airlines Flight 57, *Step 3*

STEP 9:

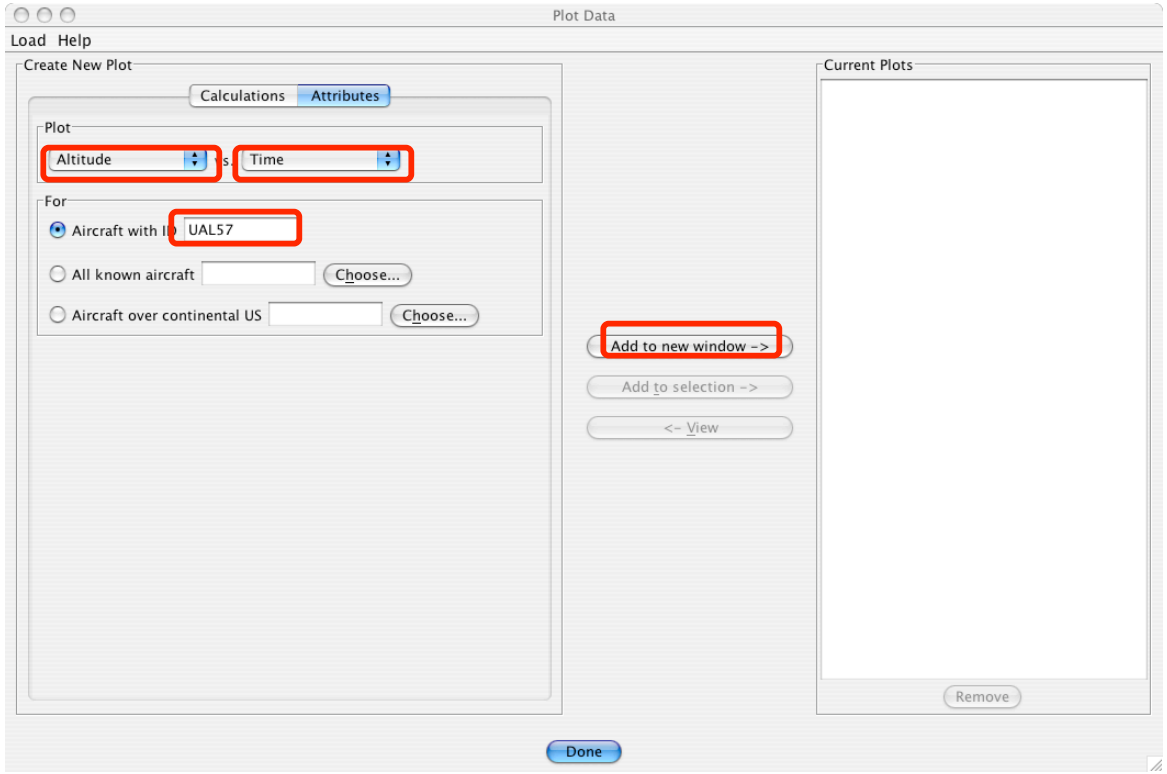
Select the "Attributes" tab.



Scenario 2: Analyze United Airlines Flight 57, *Step 3*

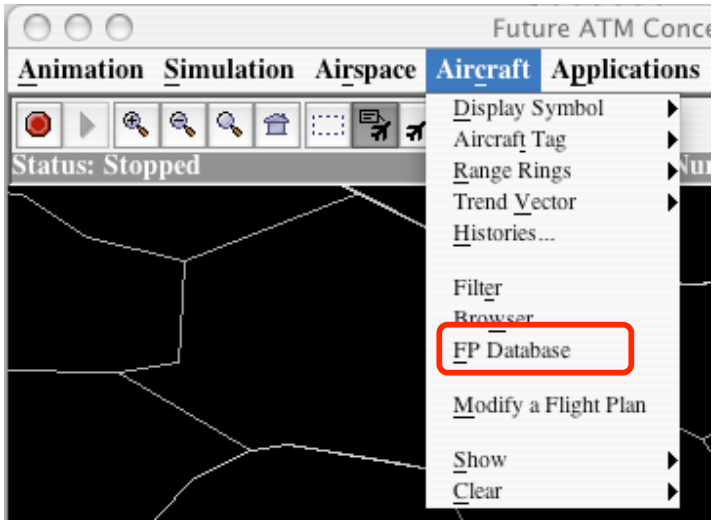
STEP 9:

Select "Altitude" and "Time" as the attributes to plot, enter "UAL57" as the aircraft id, and press the "Add to new window" button. Repeat these steps with "Ground Speed" and "Time" as the attributes to display.



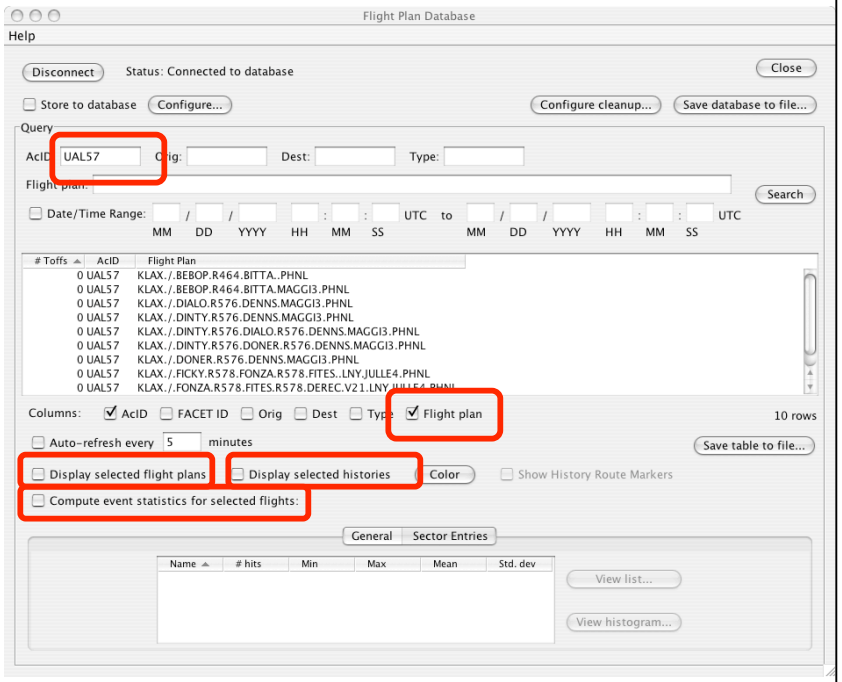
Scenario 2: Analyze United Airlines Flight 57, *Step 4*

Step 10:
Choose *FP Database* from the **Aircraft** menu



Scenario 2: Analyze United Airlines Flight 57, *Step 4*

Step 11:
(a) Enter UAL57 as the Acid, (b) deselect the "Flight Plan" column entry, (c) select UAL57 from the query list, (d) select the "Display selected Flight Plans" and "Display Selected Histories" checkboxes, then (e) press the "Compute event statistics for selected flights" checkbox.



Outline

Scenario 1: Examine Flights in Oakland Oceanic Sector 4

Scenario 2: Analyze United Airlines Flight 57

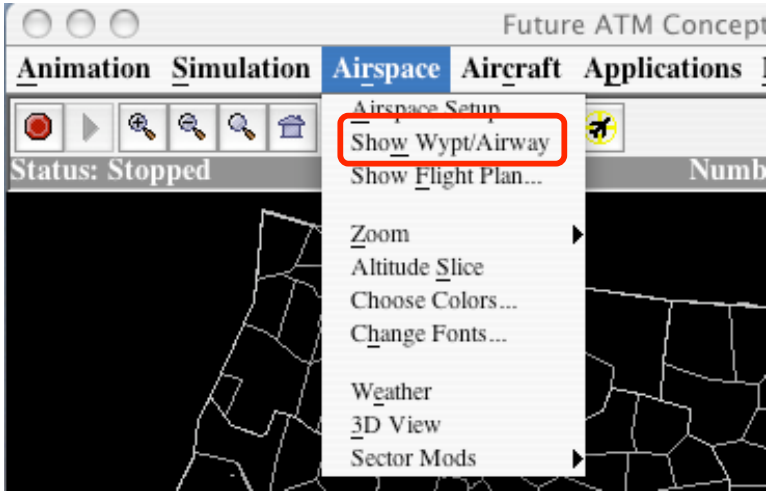
Scenario 3: Explore the HNL to SFO Traffic Stream

Scenario 4: Load Display GFS Data

Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 1*

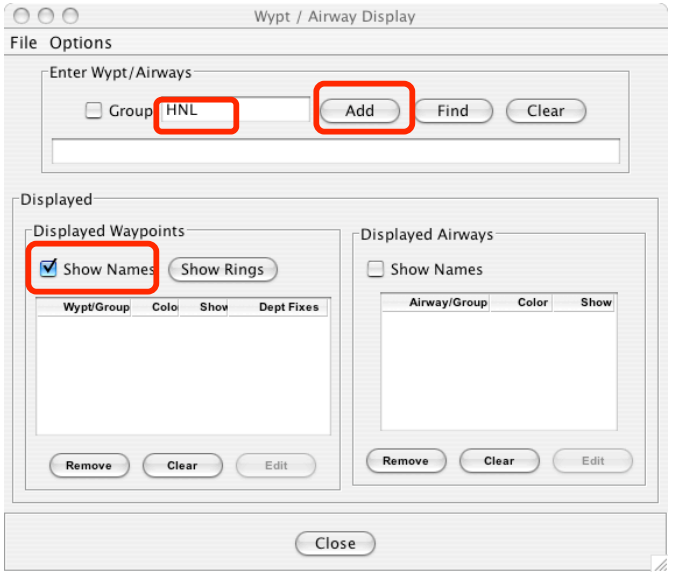
STEP 1:

Select the *Show Wypt/Airway* menu item from the **Airspace** menu.



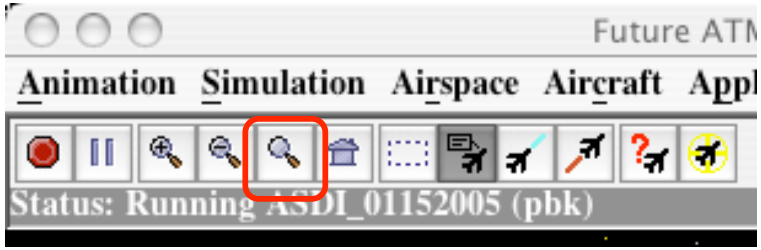
STEP 2:

Enter HNL in the Wypt/Airways field, press the "Add" button, and select the "Show Names" checkbox. Repeat for SFO.

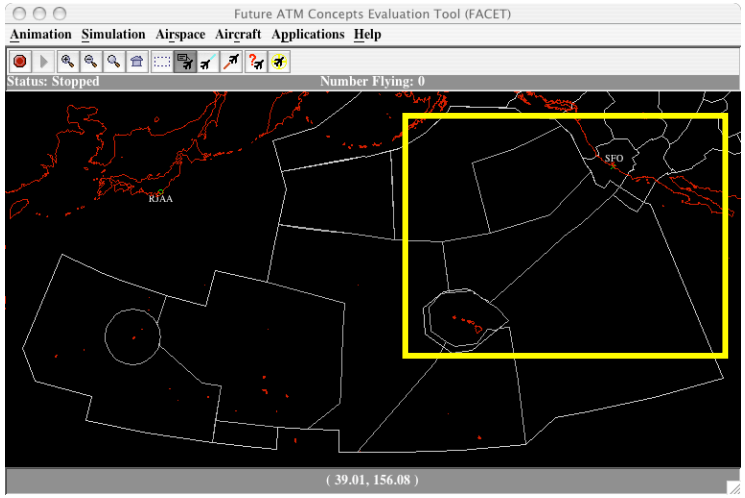


Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 2*

Step 3:
Press the "Select Zoom" toolbar button to begin focusing the display on the Central East Pacific

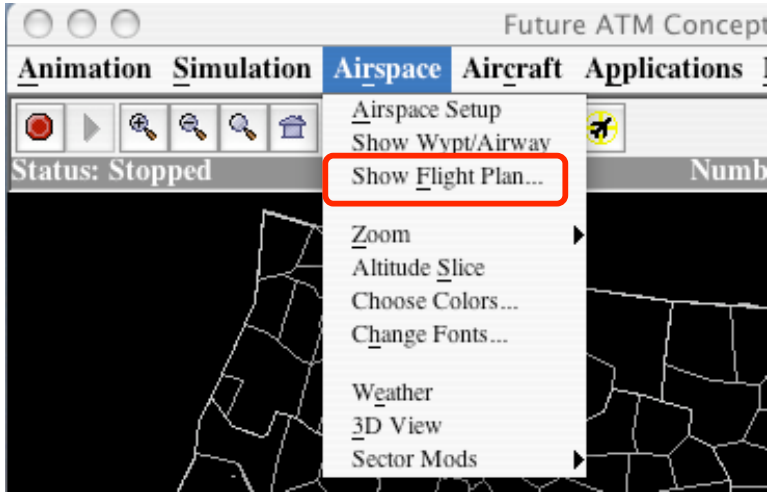


Step 4:
With the mouse, select the area highlighted in yellow.

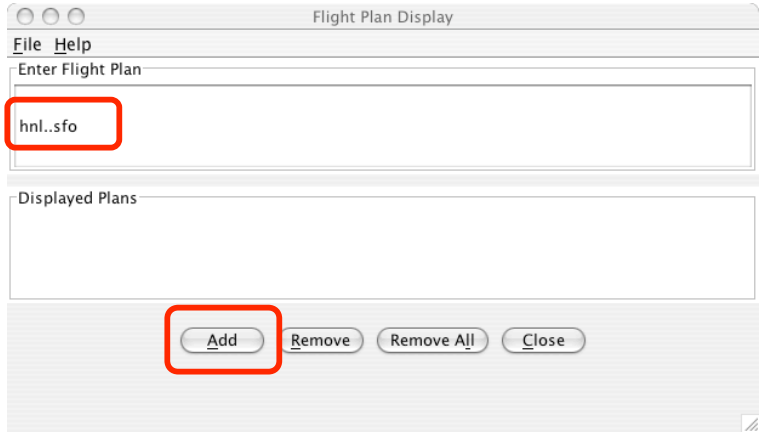


Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 3*

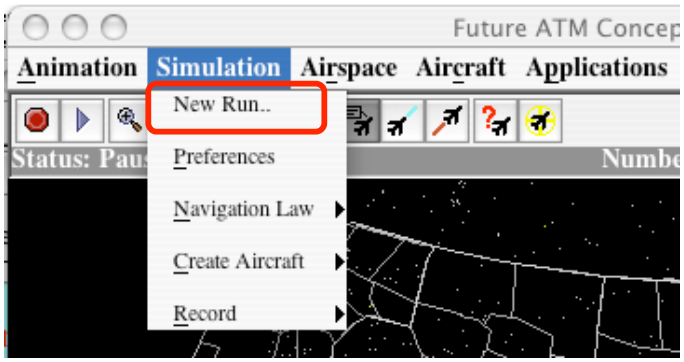
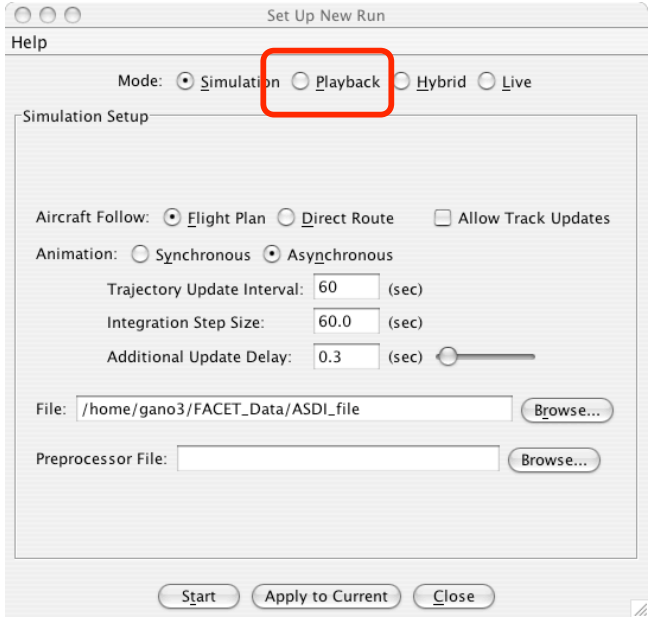
Step 5:
Select the *Show Flight Plan* menu item from the **Airspace** menu



Step 6:
Enter "HNL..SFO" in the flight plan field and press the "Add" button.



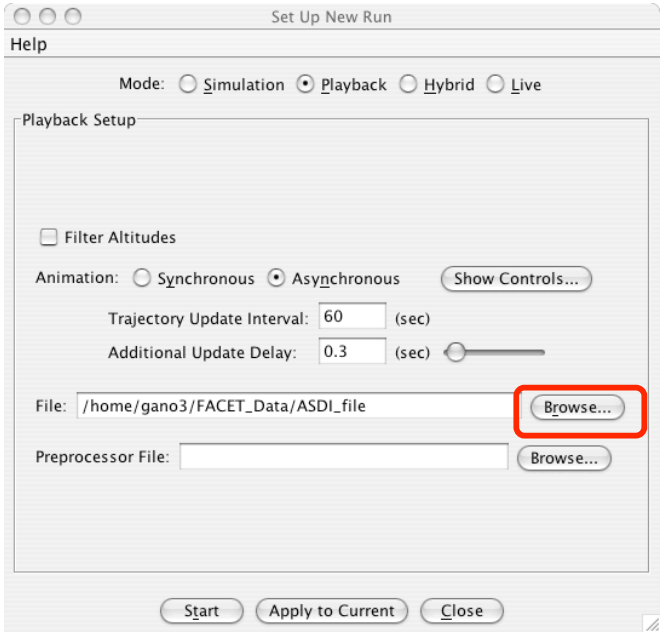
Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 4*

Step 7: Select the *New Run* menu item from the **Simulation** menu	
Step 8: Select the Playback radio button from the "Set Up New Run" panel.	

Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 4*

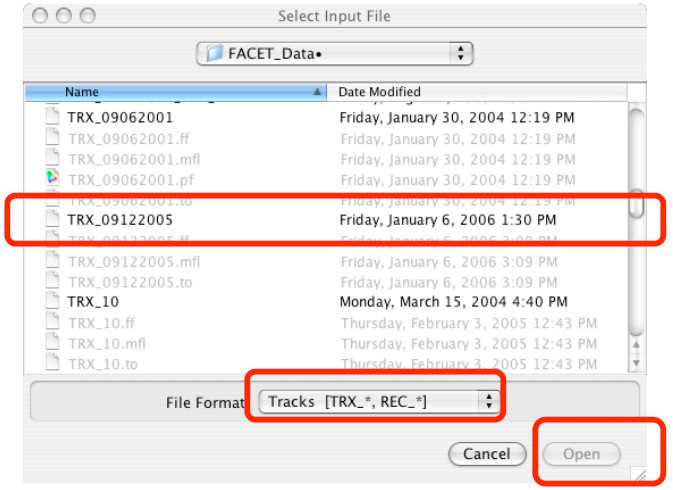
STEP 9:

Set the playback run attributes and select the "Browse" button. By default, none of the attributes should require changing.



STEP 10:

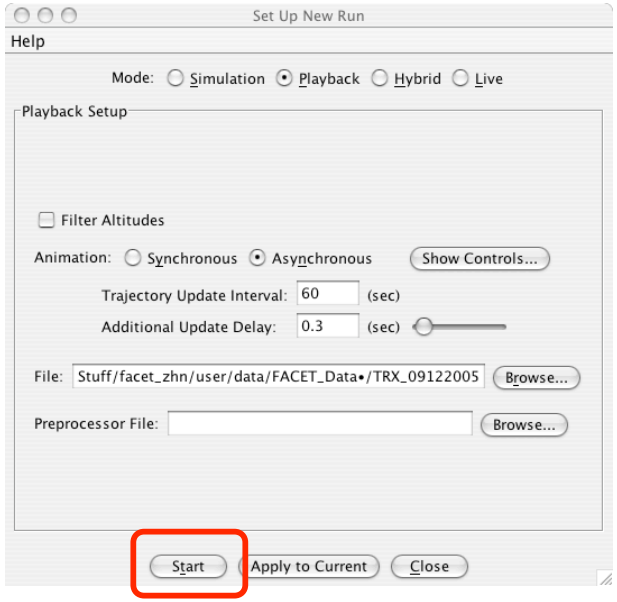
Select the "Tracks" file filter then select the TRX_09122005 input file. After completing these steps press the "Open" button.



Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 4*

STEP 11:

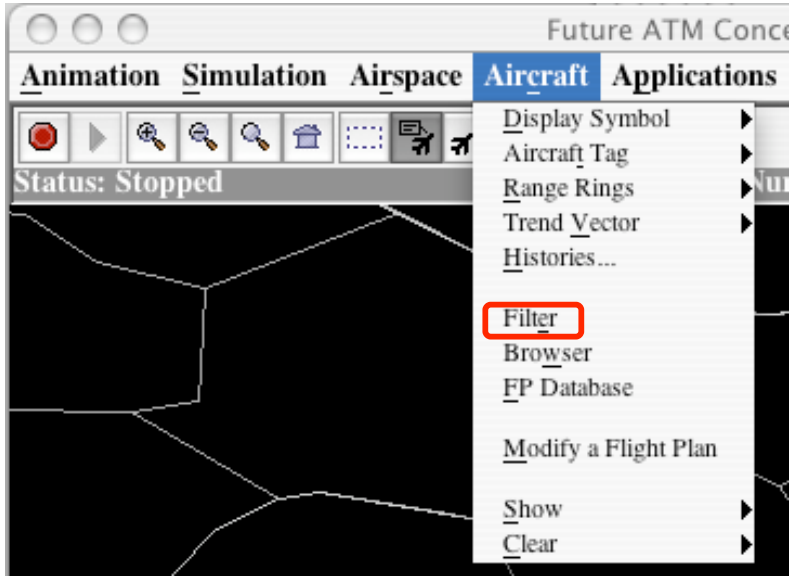
Press the Start button to initiate the FACET playback session



Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 5*

STEP 12:

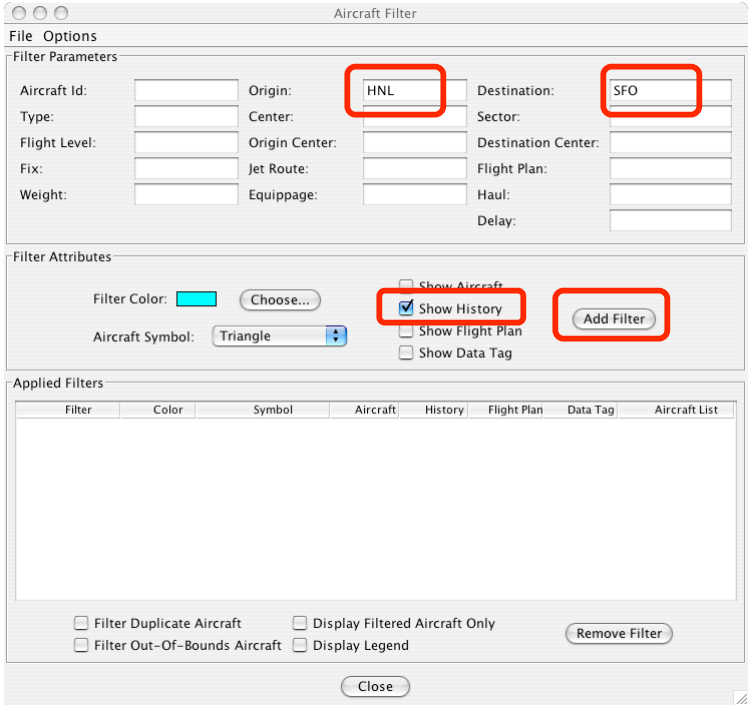
Select the *Filter* menu item from the **Aircraft** menu



Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 5*

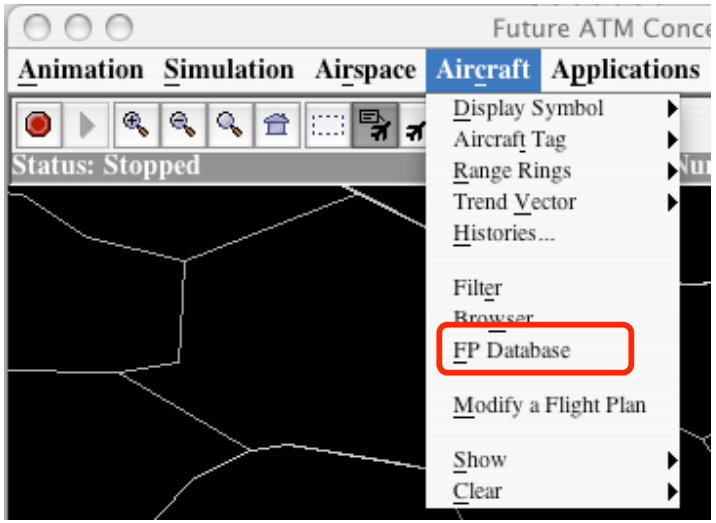
STEP 13:

In the Filter panel, enter HNL in the Origin field, SFO in the Destination field, select the "Show History" checkbox, and press the "Add Filter" button.



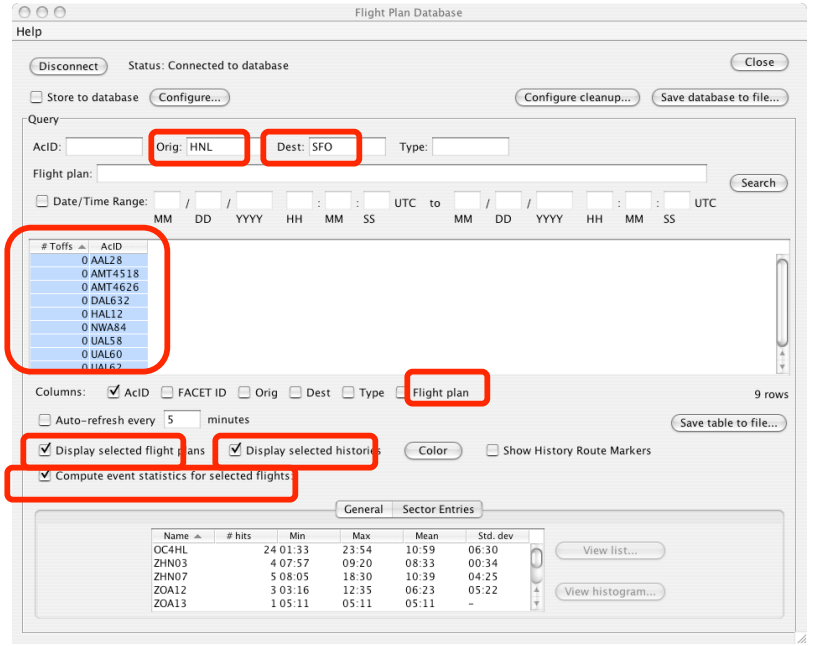
Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 6*

Step 10:
Choose *FP Database* from the **Aircraft** menu



Scenario 3: Explore the HNL to SFO Traffic Stream, *Step 6*

Step 11:
(a) Enter HNL in the Orig field, (b) SFO in the Dest field, (c) deselect the "Flight Plan" column entry, (d) select all entries in the query list, (e) select the "Display selected Flight Plans", "Display Selected Histories" checkboxes, and press the "Compute event statistics for selected flights" checkboxes.



Outline

Scenario 1: Examine Flights in Oakland Oceanic Sector 4

Scenario 2: Analyze United Airlines Flight 57

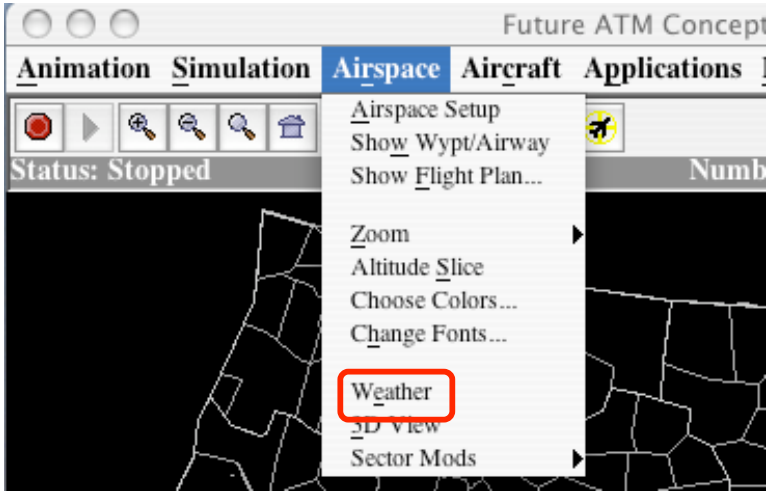
Scenario 3: Explore the HNL to SFO Traffic Stream

Scenario 4: Load Display GFS Data

Scenario 4: Load/Display GFS Data, *Step 1*

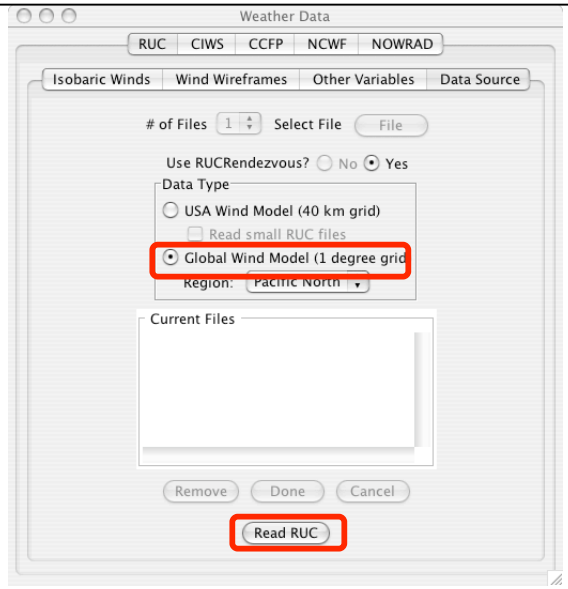
STEP 1:

Select the *Weather* menu item from the **Airspace** menu.



STEP 2:

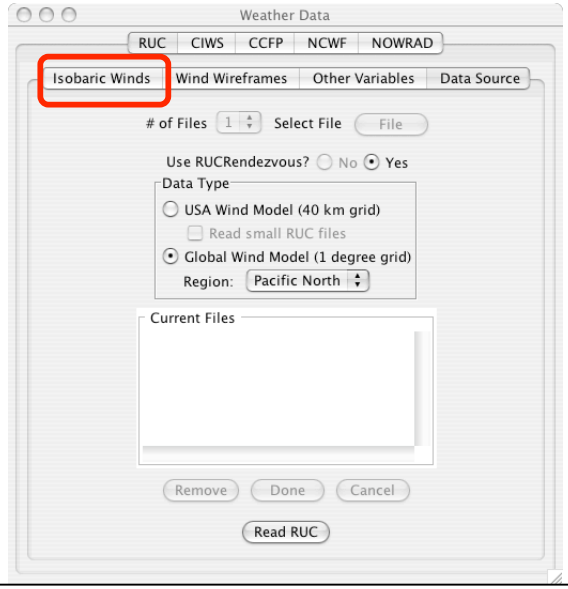
Select the "Global Wind Model" radio button and press the "Read RUC" button.



Scenario 4: Load/Display GFS Data, *Step 2*

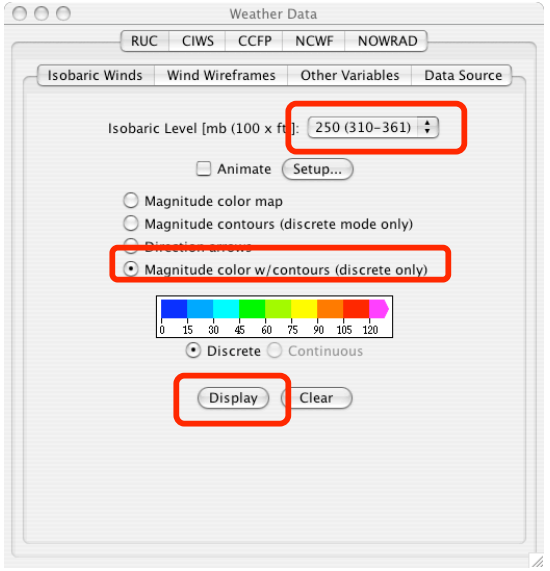
STEP 3:

Select the "Isobaric Winds" tab.



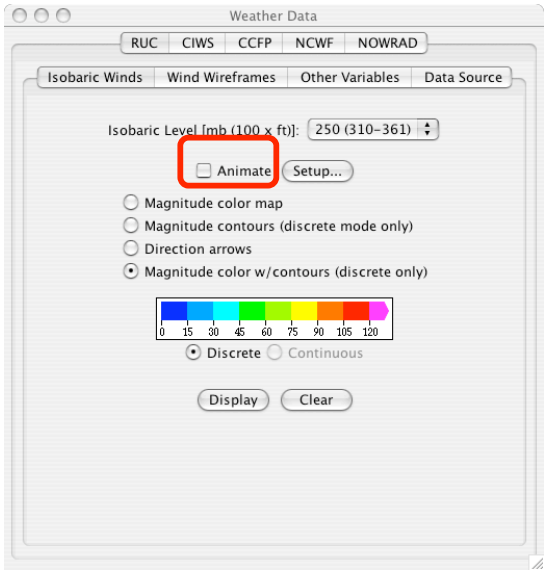
STEP 4:

(a) Select the 250 mb item from the isobaric level list, (b) select the "Magnitude color w/contours" radio button, and (c) press the "Display" button.



Scenario 4: Load/Display GFS Data, *Step 3*

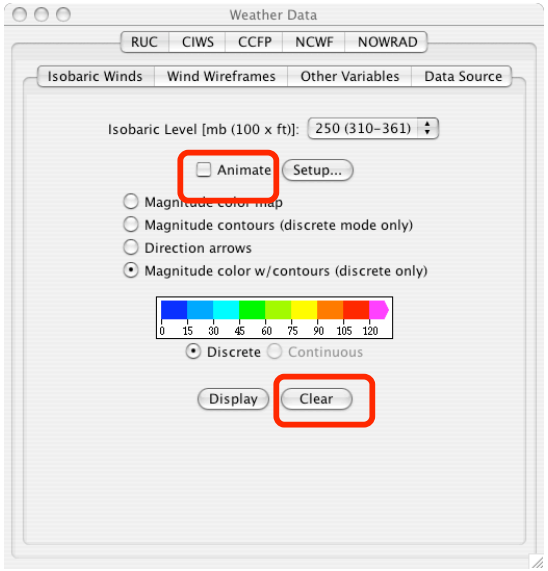
STEP 5:
Select the "Animate" checkbox.



Scenario 4: Load/Display GFS Data, *Step 4*

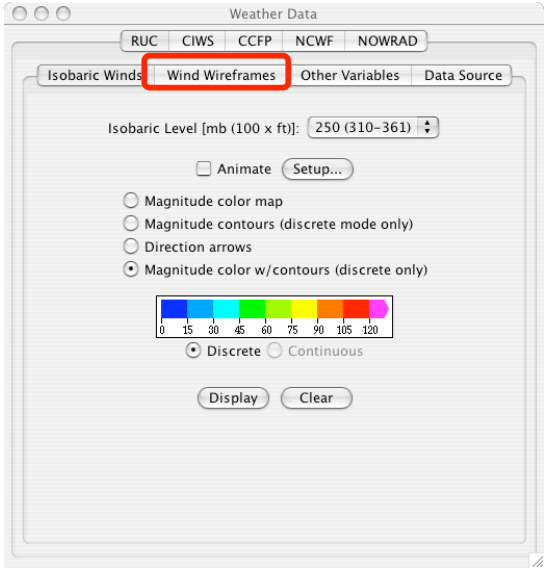
STEP 6:

De-select the "Animate" checkbox if necessary and press the "Clear" button.



STEP 7:

Select the "Wind Wireframes" tab.



Scenario 4: Load/Display GFS Data, *Step 4*

STEP 8:

Select the “>90” threshold level and press the “Display” button.